Amendment to Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Withdrawn) A method of correlating at least two views of an object, comprising:

providing a data structure that links first geometry of a first one of the view with a second one of the view; and

in response to a user selecting the first geometry, indicating a correlation between the first geometry and the second one of the views

2. (Withdrawn) A method according to claim 1, wherein indicating includes highlighting the second one of the views.

3. (Withdrawn) A method, according to claim 1, wherein, in response to the second one of the views not being visible on a user screen, displaying the second one of the views on the user screen

4. (Withdrawn) A method, according to claim 1, wherein the first geometry includes at least one of: a section line and a detail circle.

5. (Withdrawn) A method, according to claim 1, wherein the data structure that links the first geometry to the second one of the views is derived from underlying three dimensional model data from which at least two views are generated.

6. (Withdrawn) A method, according to claim 1, wherein selecting the first geometry includes locating a cursor arrow on the first geometry and clicking a mouse button.

7. (Withdrawn) A method of displaying two views of an object, comprising:

selecting a first one of the views;

selecting a second one of the views; and

moving at least one of the views so that the first view is in proximity to the second view.

8. (Withdrawn) A method, according to claim 7, wherein, if the first view is a projection of the second view, moving at least one of the views includes snapping the views into alignment.

9. (Withdrawn) A method, according to claim 8, wherein aligning the first and second views includes using transform matrices associated with each of the views

10. (Withdrawn) A method, according to claim 9, wherein the transform matrices correlate relative coordinates of each of the views with an absolute coordinate system.

11. (Withdrawn) A method, according to claim 7, wherein selecting the first view and selecting the second view includes locating a cursor arrow the views and clicking a mouse button.

12. (Withdrawn) A method, according to claim 7, wherein selecting the first view and selecting the second view includes dragging and dropping at least one of the views into closer proximity with the other one of the views.

13. (Previously Presented) A method of showing a relationship between at least two views of a three dimensional model, the method comprising:

processing three-dimensional model data to generate a two-dimensional drawing of the model, the drawing comprising a first and a second view of the model;

receiving user input to position a pointer at a location in three-dimensional space;

displaying the two-dimensional drawing, said displaying including:

displaying the pointer in the first view at a relative location in the first view's two-dimensional space that corresponds to the location of the pointer in three-dimensional space; and

displaying the pointer in the second view at a relative location in the second view's two-dimensional space that corresponds to the location of the pointer in three-dimensional space.

14. (Currently Amended) A method, according to claim [12] 13, wherein the relative locations are determined by applying a transform matrix for each of the views to the absolute location of the pointer.

15. (Currently Amended) A method, according to claim [12] 13, further comprising:

in response to a user moving the pointer in the first one of the views, moving the pointer a corresponding amount in the second one of the views.

16. (Canceled)

17. (Currently Amended) A method, according to claim 15, wherein the first view comprises a first two-dimensional coordinate space representing a projection of the model, and the method further comprising:

receiving input from [a] the user to move the pointer in the first two-dimensional coordinate space; and

determining a new location of the pointer in three-dimensional space by applying an inverse of a first transform matrix mapping the model to the first view to determine the new location of the pointer based on the received input to ~~moving~~ move the pointer in the first two-dimensional coordinate space.

18. (Previously Presented) A method, according to claim 17, wherein the new location for the pointer in the second view is determined by applying a second transform matrix for the second view to the new location of the pointer in three-dimensional space.

19. (Currently Amended) A method implemented in a computer-aided design system [of] for displaying a three-dimensional model having a plurality of two-dimensional views associated therewith, each view comprising a representation of the three-dimensional model from a predetermined viewpoint comprising:

rotating the three-dimensional model to present a first one of the views, said views comprising views generated based on the three-dimensional model;

automatically pausing to show the first one of the views, wherein the first one of the views is the representation of the three-dimensional model from the predetermined viewpoint that correlates with a first orientation of the rotated three-dimensional model; and

continuously rotating and automatically pausing the model to present other ones of the views, wherein the other ones of the views are representations of the three-dimensional model from predetermined viewpoints that correlate with other orientations of the rotated three-dimensional model.

20. (Previously Presented) A method, according to claim 19, further comprising:

in response to a user indicating that rotation of the three-dimensional model should stop, suspending rotation of the three-dimensional model until the user indicates otherwise.

21. (Currently Amended) A method implemented in a computer-aided design system of displaying a three-dimensional model having a plurality of two-dimensional views associated therewith, each view comprising a representation of the three-dimensional model from a predetermined viewpoint comprising:

rotating the three-dimensional model to present a first one of the views, said views comprising views generated based on the three-dimensional model;

pausing to show the first one of the views;

continuously rotating and pausing the model to present other ones of the views;

in response to a user indicating that rotation of the three-dimensional model should stop, suspending rotation of the three-dimensional model until the user indicates otherwise; and

_____after the user has indicated that rotation should stop at a first particular one of the views, indicating a correlation between a first geometry of the first particular one of the views and a second particular one of the views.

22. (Original) A method, according to claim 21, wherein indicating includes highlighting the second particular one of the views.

23. (Original) A method, according to claim 21, wherein, in response to the second particular one of the views not being visible on a user screen, displaying the second particular one of the views on the user screen.

24. (Original) A method, according to claim 21, wherein the first geometry includes at least one of:
a section line and a detail circle.

25. (Currently Amended) A method, according to claim 21, further comprising:
after indicating [a] the correlation between [a] the first geometry of the first particular one of the views and [a] the second particular one of the views, rotating the three-dimensional model to present the second particular one of the views.

26. (Original) A method, according to claim 19, further comprising:
in response to a presented view being a section view, removing a portion of the model to show the view.

27. (Currently Amended) A computer-based system, for providing interpretation of an electronic drawing, having a plurality of views, comprising:

a virtual folding process for permitting a viewer to view selected views in proximity to each other from [a] the plurality of ~~possible~~ views;

a hyperlink process for simultaneously highlighting at least one of a plurality of coordinates of a viewed object as the coordinates appear[s] in more than one view;

a pointer for simultaneously pointing to [the] a same point of a viewed object as the same point appears in more than one view; and

a drawing animator for rotating a three-dimensional depiction of the viewed object about an axis of rotation and highlighting a two-dimensional view when the two-dimensional view is coincident with a plane of the electronic drawing.

28. (Previously Presented) A computer-based system, according to claim 27, wherein two-dimensional data for the electronic drawing and a program for displaying the electronic drawing are stored in a single file.

29. (Original) A computer-based system, according to claim 28, further comprising storing three-dimensional data in the single file.

30. (Currently Amended) A method, according to claim [12] 13, wherein:

the first view comprises a first plurality of two-dimensional objects,

the second view comprises a second plurality of two-dimensional objects, and

for each of said first plurality of two-dimensional objects there is a corresponding one of the second plurality of two-dimensional objects such that corresponding ones of the two-dimensional objects represent a same feature of the ~~three~~ three- dimensional model.

31. (Currently Amended) A method according to claim 30 wherein, in response to a change in the first view when the second view is not visible on a user screen, automatically displaying the second view on the user screen.

32. (Currently Amended) The method of claim 19 wherein data for [the] display of each two-dimensional view and a program for displaying the views are stored in a single file.

33. (Original) The method of claim 32 further comprising storing three-dimensional model data in the single file.

34. (Currently Amended) The method of claim [12] 13 wherein [the] data used to ~~for the~~ display [of] the two-dimensional drawing and a program for displaying the two-dimensional drawing are stored in a single file.

35. (Original) The method of claim 34 further comprising storing three-dimensional data in the single file.

36. (Currently Amended) A method of showing a relationship between at least two views of a model, the method comprising:

processing model data comprising data detailing [a] the model and data defining a plurality of drawing views of the model, each drawing view comprising a plurality of two-dimensional objects determined from the data detailing the model;

displaying a first one of the drawing views on an output device;

receiving input from a user selecting a first object from the first one of the drawing views;

selecting a second one of the drawing views based on a correspondence between the selected first object and the second one of the drawing views, said correspondence being determined based on the model data; and

automatically displaying the second one of the drawing views to the user.

37. (Previously Presented) The method of claim 36 wherein displaying the second one of the drawing views comprises displaying the first and second one of the drawing views simultaneously.

38. (Previously Presented) The method of claim 36 wherein:

the selected first object comprises a detail circle representing an area of the first one of the drawing views for which there is a corresponding detailed view, and selecting the second one of the drawing views comprises selecting said corresponding detailed view.

39. (Original) The method of claim 36 wherein the model is a three-dimensional model.

40. (Previously Presented) The method of claim 39 wherein:
the selected first object comprises a section line representing a position of a corresponding sectional view of the three-dimensional model, and selecting the second one of the drawing views comprises selecting said corresponding sectional view.

41. (Currently Amended) The method of claim 39 wherein:
the selected first object is derived from data modeling a first part of the ~~three~~ three-dimensional model;
the second one of the drawing views comprises a second object derived from the first part of the three-dimensional model; and

selecting [a] the second one of the drawing views based on [a] the correspondence between the selected first object and the second one of the drawing views comprises selecting based on the first object and the second object being derived from a same part, which is the first part of the three- dimensional model.

42. (Currently Amended) A method, according to claim 39, wherein:

the first one of the drawing views comprises a first plurality of two-dimensional objects;

the second one of the drawing views comprises a second plurality of two-dimensional objects; and

for each of said first plurality of two-dimensional objects there is a corresponding one of the second plurality of two-dimensional objects such that corresponding ones of the two-dimensional objects represent a same feature of the ~~three~~ three-dimensional model.

43. (Canceled)

44. (Canceled)

45. (Currently Amended) A data storage apparatus storing instructions for causing a computer system to show a relationship between at least two views of a ~~three~~ three-dimensional model, the instructions comprising instructions to cause the computer system to:

process three-dimensional model data to generate a two-dimensional drawing of the model, the drawing comprising a first and a second view of the model;

receive user input to position a pointer at a location in three-dimensional space;

display the two-dimensional drawing, said instructions to display comprising instructions to:

display the pointer in the first view at a relative location in the first view's two-dimensional space that corresponds to the location of the pointer in three-dimensional space; and

display the pointer in the second view at a relative location in the second view's two-dimensional space that corresponds to the location of the pointer in three-dimensional space.

46. (Previously Presented) The data storage apparatus of claim 45 wherein the instructions further comprise instructions to move the pointer a corresponding amount in the second view in response to a user moving the pointer in the first views.

47. (Currently Amended) The data storage apparatus of claim 46 wherein the first view comprises a first two-dimensional coordinate space representing a projection of the model, and the instructions further comprise instructions to:

receive input from [a] the user to move the pointer in the first two-dimensional coordinate space; and

determine a new location of the pointer in three-dimensional space by applying an inverse of a transform matrix mapping the three-dimensional model to the first view to determine [a] the new location of the pointer based on the received input to ~~moving~~ move the pointer in the first two-dimensional coordinate space.

48. (Currently Amended) The data storage apparatus of claim 45 wherein:

the first view comprises a first plurality of two-dimensional objects,

the second view comprises a second plurality of two-dimensional objects, and

for each of said first plurality of two-dimensional objects there is a corresponding one of the second plurality of two-dimensional objects such that corresponding ones of the two-dimensional objects represent a same feature of the ~~three~~ three-dimensional model.

49. (Currently Amended) The data storage apparatus of claim 45 wherein the data for [the] display of the two-dimensional drawing and instructions for displaying the two-dimensional drawing are stored in a single file.

50. (Currently Amended) A data storage apparatus storing instructions for causing a computer to display a three-dimensional model having a plurality of two- dimensional views associated therewith, each view comprising a representation of the model from a predetermined viewpoint, said instructions further comprising instructions to:

rotate the three-dimensional model to present a first one of the two-dimensional views, said two-dimensional views comprising views generated based on the ~~three~~ three-dimensional model;

automatically pause to show the first one of the two-dimensional views, wherein the first one of the views is the representation of the three-dimensional model from the predetermined viewpoint that correlates with a first orientation of the rotated three-dimensional model; and

continuously rotate and pause the model to present other ones of the views, wherein the other ones of the views of the three-dimensional model are representations of the three-dimensional model from predetermined viewpoints that correlate with other orientations of the rotated three-dimensional model~~two-dimensional views~~.

51. (Previously Presented) The data storage apparatus of claim 50 further comprising instructions to:

suspend rotation of the three-dimensional model in response to user input indicating that rotation of the three-dimensional model should stop until the receipt of additional user input that indicates otherwise.

52. (Currently Amended) The data storage apparatus of claim 50 further comprising instructions that, in response to a presented view being a section view, remove a portion of the three-dimensional model to show the section ~~two-dimensional~~ view.

53. (Currently Amended) The data storage apparatus of claim 50 wherein data used to ~~for the~~ display [of] each two-dimensional view and a program for displaying the two-dimensional views are stored in a single file.

54. (Previously Presented) The data storage apparatus of claim 53 further comprising instructions to store three-dimensional data in the single file.

55. (Currently Amended) A data storage apparatus comprising instructions for causing a computer system to show a relationship between at least two views of a model, said instructions comprising instructions to:

process model data comprising data detailing the model and data defining a plurality of drawing views of the model, each drawing view comprising a plurality of two-dimensional objects determined from the data detailing the model;

display a first one of the drawing views on an output device;

receive input from a user selecting a first object from the first one of the drawing views;

select a second one of the drawing views based on a correspondence between the selected first object and the second one of the drawing views, said correspondence being determined based on the model data; and

automatically display the second one of the views to the user.

56. (Previously Presented) The apparatus of claim 55 wherein the instructions to display the second one of the view comprise instructions to display the first and second ones of the views simultaneously.

57. (Currently Amended) The apparatus of claim 55 wherein:

the selected first object comprises a detail circle representing an area of the first one of the drawing views for which there is a corresponding detailed view, and the instructions to select the second one of the drawing views comprise instructions to select said corresponding detailed view.

58. (Previously Presented) The apparatus of claim 55 wherein the model is a three-dimensional model.

59. (Currently Amended) The apparatus of claim 58 wherein:

the selected first object comprises a section line representing a position of a corresponding sectional view of the three-dimensional model, and the instructions to select the second one of the drawing views comprise instructions to select said corresponding sectional view.

60. (Currently Amended) The apparatus of claim 58 further comprising instructions to:

derive the selected first object from data modeling a first part of the three-dimensional model;

derive a second object from the first part of the three-dimensional model wherein the second one of drawing the views comprises said second object;

selecting the second one of the drawing views based on the correspondence between the selected first object and the second one of the drawing views comprises selecting based on the first object and the second object being derived from a same part, which is the first part of the ~~three~~ three-dimensional model.

61. (Previously Presented) The apparatus of claim 58 wherein:

the first one of the drawing views comprises a first plurality of two-dimensional objects,

the second one of the drawing views comprises a second plurality of two-dimensional objects, and

for each of said first plurality of two-dimensional objects there is a corresponding one of the second plurality of two-dimensional objects such that corresponding ones of the two-dimensional objects represent a same feature of the three-dimensional model.